

FRENCH REPUBLIC

PATENT

MINISTRY
OF INDUSTRY AND TRADE

INDUSTRIAL PROPERTY
DEPARTMENT

Gr. 20. - Cl. 4

No. 1.180.592

International classification: F 25 j

Filling and plugging of receptacles, particularly those intended to contain liquids saturated with gas under pressure.

Mr. Pierre Charmat, residing in France (Seine).

Applied for on August 5, 1957 at 2:17 p.m. in Paris.

Issued on December 29, 1958. - Published on June 5, 1959.

(Patent the issuance of which was postponed pursuant to Article 11, § 7, of the law of July 5, 1844, amended by the law of April 7, 1902).

This invention concerns:

1 A bottle stopper, especially for a liquid saturated with gas under pressure, consisting of two elements:

a. An outer element in contact with the neck of the bottle, having a central channel the lower part of which is in general truncated in shape, the large base being turned toward the inside of the bottle, and

b. An inner element resting, in the closed position of the bottle, on the truncated part of the outer element.

2 A filling process for a bottle equipped with a stopper according to the preceding paragraph, consisting of putting into the bottle a stopper according to the preceding paragraph, bringing the bottle thus equipped under the nozzle of a bottling machine, inserting the inner element of the stopper inside the bottle by means of the nozzle of the bottling machine, proceeding to fill the bottle and bringing the inner element into contact with the outer element by withdrawing the nozzle, the inner pressure of the bottle applying the inner element against the outer element, and the latter against the bottle neck.

By way of example only, the attached drawing represents:

Figure 1.- A view of a bottle equipped with a stopper according to this invention in the process of being filled;

Figure 2.- A view of the top of that bottle, once closed.

In Figure 2, the bottle 1 is sealed by a stopper consisting of an outer element 2 and an inner element 3. The outer element 2 is applied to the neck 1a of the bottle 1 and has a central channel 2b the lower part of which has truncated walls 2c, the central part of it having cylindrical walls 2d. The inner element 3 consists of a kind of upper cup 3a and a sort of cap 3b the outer edges of which 3c are truncated. The upper part 3a fits between the walls 2d, while the lower part 3b adheres by its surfaces 3c to the truncated parts 2c.

As can be seen in Figure 1, the bottling machine 4 includes a tulip-type centering device 4a, which centers the bottle 1 in relation to the bottling machine. The latter has a tubular nozzle 4b through which the liquid enters the bottle 1 through an orifice 4c. The nozzle 4b has an air return

pipe 4d. The end 4e of the nozzle enters the cup 3a of the inner element 3, then pushes the latter back inside the bottle 1 by means of a shoulder 4f. When filling is completed, the bottle 1 drops down in relation to the bottling machine 4. The inner stopper 3 goes into the outer element, part 3a between the walls 2d of the central channel 2b, while part 3b is applied to the truncated walls 2c and thus, under the internal pressure of the gases contained inside the bottle 1, insures tightness between the two elements 2 and 3 and between the outer element 2 and the bottle 1.

SUMMARY

This invention concerns:

- 1 A bottle stopper, especially for liquid saturated with gas under pressure, consisting of two elements:
 - a. An outer element in contact with the neck of the bottle, having a central channel the lower part of which is generally truncated in shape, the large base being turned toward the inside of the bottle, and
 - b. An inner element resting in the closed position of the bottle on the truncated part of the outer element.

9 - 41078 **Price of this part: 100 francs**

2. A filling process for a bottle with a stopper according to the preceding paragraph, consisting of inserting into the bottle a stopper according to the preceding paragraph, bringing that bottle so equipped under the nozzle of a bottling machine, pushing the inner element of the stopper inside the bottle with the bottling machine nozzle, proceeding to fill the bottle and bringing the inner element into contact with the outer element by removing the nozzle, the pressure inside the bottle applying the inner element to the outer element and the latter to the neck of the bottle.

PIERRE CHARMAT

By proxy:

P. LOYER

To purchase sections, contact the IMPRIMERIE NATIONALE, 27, rue de la Convention, Paris (15e).